REMARKS

Claims 1-30 are pending in this application. By this Amendment, claims 13, 25, 28, and 29 are amended. In addition, Figure 5 has been amended to correct a typographical error. A replacement sheet that includes a corrected Figure 5 is attached. Reconsideration in view of the above amendments and the following remarks is respectfully requested.

Unless otherwise indicated in the remarks set forth below, the amendments to the claims were made for the purpose of correcting informalities and/or to more clearly define the claimed invention, and are not made for the purpose of overcoming the cited art.

The Patent Office rejects claims 1, 13, 21, 22 and 25 under 35 U.S.C. §102(b) as anticipated by U.S. Patent No. 4,768,853 to Bhagavatula. This rejection is respectfully traversed.

Bhagavatula fails to disclose every claimed feature, as required under §102. Bhagavatula discloses an optical fiber dispersion transformer, which compensates for chromatic dispersion effects in multimode optical fibers. Specifically, Bhagavatula discloses a wavelength disperser/separator 15 which receives light output by a multimode fiber 11. The wavelength disperser/separator separates the light from the multimode fiber 11 into spatially separated wavelength components (see column 4, lines 29-40). Each wavelength component is incident onto the core portion of the input face of the multimode delay line fiber 16. However, each wavelength component is incident onto the core portion at different radial

positions, thereby exciting different modes. The index profile and length of multimode delay line fiber 16 is chosen so that delay differences between the different modes substantially compensate for the dispersion effects in multimode fiber 11 (see column 4, lines 41-54).

In contrast, claims 1 and 13 recite a detector (detector means) that receives an optical signal transmitted through a multimode optical fiber and converts the transmitted optical signal to a detector signal, and an adaptive equalizer (adaptive equalizer means) that generates an adaptive equalizer signal that, when combined with the detector signal, compensates for unwanted modes in the detector signal. Claim 21 recites an adaptive equalizer that receives at least a portion of an output signal from a decision element as a feedback signal and generates an adaptive equalizer signal based on the feedback signal, and an adder that combines a detector signal with the adaptive equalizer signal, thereby compensating for unwanted modes in the detector signal caused by differential mode dispersion in the multimode optical fiber. Claim 22 recites the same features as claim 1, as well as an adder that combines the adaptive equalizer signal with the detector signal. Claim 25 recites a method comprising converting an optical signal transmitted through a multimode fiber to an electrical signal, generating an adaptive equalizer signal that, when combined with the electrical signal, reduces unwanted modes in the electrical signal, and combining the adaptive equalizer signal with the electrical signal.

Bhagavatula fails to teach or suggest these features. In fact, Bhagavatula does not even address the issue of adaptive equalization. Bhagavatula teaches

compensating for chromatic dispersion optically by physically separating the different wavelength components that are output by the multimode fiber, and directing each wavelength component to a different section of a second multimode optical fiber. In contrast, the present invention converts, with a detector, the optical signal from a multimode fiber into an electrical signal ("detector signal"), and generates an adaptive equalizer signal that, when combined with the detector signal, compensates for unwanted modes in the detector signal.

Accordingly, for at least the reasons set forth above, Applicant respectfully submits that Bhagavatula fails to anticipate the subject matter of claims 1, 13, 21, 22 and 25. Thus, withdrawal of the rejection under 35 U.S.C.§102(b) is respectfully requested.

The Patent Office rejects claims 2-12, 14-20, 23, 24 and 26-30 under 35 U.S.C.§103(a) as unpatentable over Bhagavatula. This rejection is respectfully traversed.

Claims 2-12 depend from claim 1, claims 14-20 depend from claim 13, claims 23 and 24 depend from claim 22, and claims 26-30 depend from claim 25. Thus, Applicant respectfully submits that claims 2-12, 14-20, 23, 24, and 26-30 are allowable for at least the reasons set forth above, as well as for the additional features they recite. Accordingly, withdrawal of the rejection under 35 U.S.C.§ 103(a) is respectfully requested.

In view of the forgoing amendments and remarks, it is respectfully submitted that this application is in condition for allowance. Favorable consideration and prompt allowance of claims 1-30 are earnestly solicited.

Please charge any shortage in fees due in connection with the filing of this, concurrent and future replies, including extension of time fees, to Deposit Account 16-0607 and please credit any excess fees to such deposit account.

Should the Examiner have any questions regarding the above-identified application, the Examiner is invited to contact René A. Vazquez, Registration No. 38,647, at the telephone number listed below.

Respectfully submitted,
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Annotated Sheet Showing Changes

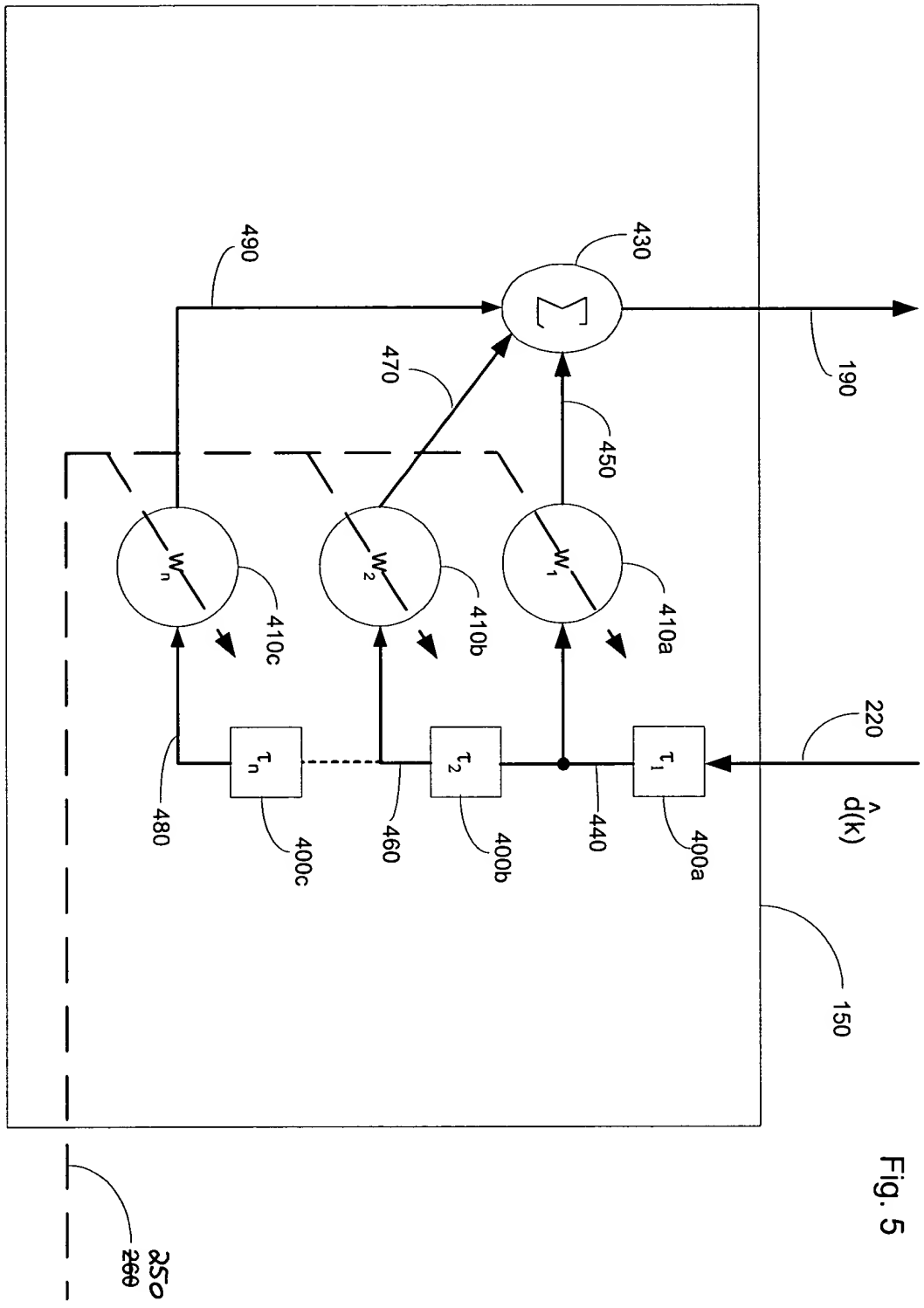

Fig. 5